

5' GCT CCC CGC GGC GGC TGG CGT CGG GAA AGT ACA GTA AAA AGT CCG AGT GCA GCC  
 9 18 27 36 45 54

63 72 81 90 99 108  
 GCC GGG CGC AGG ATG GGA TCC GGC TCC AGC TAC CGG CCC AAG GCC ATC TAC  
 M G S G S S Y R P K A I Y

117 126 135 144 153 162  
 CTG GAC ATC GAT GGA CGC ATT CAG AAG GTA ATC TTC AGC AAG TAC TGC AAC TCC  
 L D I D G R I Q K V I F S K Y C N S

171 180 189 198 207 216  
 AGC GAC ATC ATG GAC CTG TTC TGC ATC GCC ACC GGC CTG CCT CGG AAC ACG ACC  
 S D I M D L F C I A T G L P R N T T

225 234 243 252 261 270  
 ATC TCC CTG CTG ACC ACC GAC GAC GGC ATG GTC TCC ATC GAC CCC ACC ATG CCC  
 I S L L T T D D A M V S I D P T M P

279 288 297 306 315 324  
 GCG AAT TCA GAA CGC ACT CCG TAC AAA GTG AGA CCT GTG GCC ATC AAG CAA CTC  
 A N S E R T P Y K V R P V A I K Q L

333 342 351 360 369 378  
 TCC GCT GGT GTC GAG GAC AAG AGA ACC ACA AGC CGT GGC CAG TCT GCT GAG AGA  
 S A G V E D K R T T S R G Q S A E R

FIGURE 1A

387 396 405 414 423 432  
CCA CTG AGG GAC AGA CGG GTT GTG GGC CTG GAG CAG CCC CGG AGG GAA GGA GCA  
P L R D R R V V G L E Q P R R E G A

441 450 459 468 477 486  
TTT GAA AGT GGA CAG GTA GAG CCC AGG CCC AGA GAG CCC CAG GGC TGC TAC CAG  
F E S G Q V E P R P R E P Q G C Y Q

495 504 513 522 531 540  
GAA GGC CAG CGC ATC CCT CCA GAG AGA GAA TTA ATC CAG AGC GTG CTG GCG  
E G Q R I P P E R E E L I Q S V L A

549 558 567 576 585 594  
CAG GTT GCA GAG CAG TTC TCA AGA GCA TTC AAA ATC AAT GAA CTG AAA GCT GAA  
Q V A E Q F S R A F K I N E L K A E

603 612 621 630 639 648  
GTT GCA AAT CAC TTG GCT GTC CTA GAG AAA CGC GTG GAA TTG GAA GGA CTA AAA  
V A N H L A V L E K R V E L E G L K

657 666 675 684 693 702  
GTG GTG GAG ATT GAG AAA TGC AAG AGT GAC ATT AAG AAG ATG AGG GAG GAG CTG  
V V E I E K C K S D I K K M R E E L

711 720 729 738 747 756  
GCG GCC AGA AGC AGG ACC AAC TGC CCC TGT AAG TAC AGT TTT TTG GAT AAC  
A A R S S R T N C P C K Y S F L D N

FIGURE1B

765 CAC AAG AAG TTG ACT CCT CGA CGC GAT GTT CCC ACT TAC CCC AAG TAC CTG CTC 810  
H K K L T P R R D V P T Y P K Y L L

819 TCT CCA GAG ACC ATC GAG GCC CTG CGG AAG CCG ACC TTT GAC GTC TGG CTT TGG 864  
S P E T I E A L R K P T F D V W L W

873 GAG CCC AAT GAG ATG CTG AGC TGC CTG GAG CAC ATG TAC CAC GAC CTC GGG CTG 918  
E P N E M L S C L E H M Y H D L G L

927 GTC AGG GAC TTC AGC ATC AAC CCT GTC ACC CTC AGG AGG TGG CTG TTC TGT GTC 972  
V R D F S I N P V T L R R R W L F C V

981 CAC GAC AAC TAC AGA AAC AAC CCC TTC CAC AAC TTC CGG CAC TGC TTC TGC GTG 1026  
H D N Y R N N P F H N F R H C F C V

1035 GCC CAG ATG ATG TAC AGC ATG GTC TGG CTC TGC AGT CTC CAG GAG AAG TTC TCA 1080  
A Q M M Y S M V W L C S L Q E K F S

1089 CAA ACG GAT ATC CTG ATC CTA ATG ACA GCG GCC ATC TGC CAC GAT CTG GAC CAT 1134  
Q T D I L I L M T A A I C H D L D H

FIGURE1C

1143 1152 1161 1170 1179 1188  
 CCC GGC TAC AAC AAC AC G TAC CAG ATC AAT GCC CGC ACA GAG CTG GCG GTC CGC  
 P G Y N N T Y Q I N A R T E L A V R

1197 1206 1215 1224 1233 1242  
 TAC AAT GAC ATC TCA CCG CTG GAG AAC CAC CAC TGC GCC GTG GCC TTC CAG ATC  
 Y N D I S P L E N H H C A V A F Q I

1251 1260 1269 1278 1287 1296  
 CTC GCC GAG CCT GAG TGC AAC ATC TTC TCC AAC ATC CCA CCT GAT GGG TTC AAG  
 L A E P E C N I F S N I P P D G F K

1305 1314 1323 1332 1341 1350  
 CAG ATC CGA CAG GGA ATG ATC ACA TTA ATC TTG GCC ACT GAC ATG GCA AGA CAT  
 Q I R Q G M I T L I L A T D M A R H

1359 1368 1377 1386 1395 1404  
 GCA GAA ATT ATG GAT TCT TTC AAA GAG AAA ATG GAG AAT TTT GAC TAC AGC AAC  
 A E I M D S F K E K M E N F D Y S N

1413 1422 1431 1440 1449 1458  
 GAG GAG CAC ATG ACC CTG CTG AAG ATG ATT TTG ATA AAA TGC TGT GAT ATC TCT  
 E E H M T L L K M I L I K C C D I S

1467 1476 1485 1494 1503 1512  
 AAC GAG GTC CGT CCA ATG GAA GTC GCA GAG CCT TGG GTG GAC TGT TTA TTA GAG  
 N E V R P M E V A E P W V D C L L E

FIGURE 1D

1521 GAA TAT TTT ATG CAG AGC GAC CGT GAG AAG TCA GAA GGC CTT CCT GTG GCA CCG 1566  
E Y F M Q S D R E K S E G L P V A P

1575 TTC ATG GAC CGA GAC AAA GTG ACC AAG GCC ACA GCC CAG ATT GGG TTC ATC AAG 1620  
F M D R D K K V T K A T A Q I G F I K

1629 TTT GTC CTG ATC CCA ATG TTT GAA ACA GTG ACC AAG CTC TTC CCC ATG GTT GAG 1674  
F V L I P M F E T V T K L F P M V E

1683 GAG ATC ATG CTG CAG CCA CTT TGG GAA TCC CGA GAT CGC TAC GAG GAG CTG AAG 1728  
E I M L Q P L W E S R D R Y E E L K

1737 CGG ATA GAT GAC GCC ATG AAA GAG TTA CAG AAG AAG ACT GAC AGC TTG ACG TCT 1782  
R I D D A M K E L Q K K T D S L T S

1791 GGG GCC ACC GAG AAG TCC AGA GAG AGA AGC AGA GAT GTG AAA AAC AGT GAA GGA 1836  
G A T E K S R E R S R D V K N S E G

1845 GAC TGT GCC TGA GGA AAG CGG GGG GCG TGG CTG CAG TTC TGG ACG GGC TGG CCG 1890  
D C A

FIGURE 1E

# FIGURE 1F

1899	1908	1917	1926	1935	1944
AGC TGC GCG GGA TCC TTG TGC AGG GAA GAG CTG CCC TGG GCA CCT GGC ACC ACA					
1953	1962	1971	1980	1989	
AGA CCA TGT TTT CTA AGA ACC ATT TTG TTC ACT GAT ACA AAA AAA AAA AA 3'					

FIGURE 1F

FIGURE 2A

118	R	R	E	G	A	F	E	S	G	Q	V	-	-	-	-	-	-	E	P	R	P	R	E	P	Q	G	C	Y	Q	E	G	Q	R	I	P	PDE9A																		
200	I	R	H	Y	-	V	S	I	I	R	V	C	N	G	N	N	K	A	E	K	I	S	E	C	V	Q	S	D	T	R	T	D	N	Q	T	G	K	H	K	D	PDE8A													
103	Q	Q	E	F	D	L	P	S	L	R	V	-	-	-	-	-	-	E	D	N	P	E	L	V	A	A	N	A	A	G	Q	Q	S	A	G	Q	Y	A	g829179															
147	P	E	R	E	E	L	-	I	Q	S	V	L	A	Q	V	A	E	-	-	-	-	-	-	Q	F	S	R	A	F	K	I	N	E	L	K	A	E	-	-	V	A	PDE9A												
239	R	R	K	G	S	L	D	V	K	A	V	A	S	R	A	T	E	V	S	S	Q	R	R	H	S	S	M	A	R	I	H	S	M	T	I	E	A	P	I	T	PDE8A													
136	R	S	R	S	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	R	G	P	P	M	S	Q	I	S	G	V	K	-	-	-	-	-	g829179													
179	N	H	L	A	V	L	E	K	R	V	E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	PDE9A												
279	K	V	I	N	V	I	N	A	A	Q	E	S	S	P	M	P	V	T	E	A	L	D	R	V	L	E	I	L	R	T	E	L	Y	S	P	Q	F	G	A	PDE8A														
153	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	R	P	L	S	H	T	N	S	F	T	-	-	-	-	-	-	-	-	-	-	-	-	-	g829179													
206	K	K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	PDE9A													
319	K	D	D	P	H	A	N	D	L	V	G	L	M	S	D	G	L	R	L	S	G	N	E	Y	V	L	S	T	K	N	T	Q	M	V	S	S	N	PDE8A																
172	-	-	E	T	P	R	E	N	E	L	-	G	T	L	L	G	E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	g829179													
239	D	V	P	T	Y	P	K	Y	L	L	S	P	E	T	I	E	A	L	R	K	P	T	F	D	V	W	L	W	E	P	N	E	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	PDE9A
359	I	I	T	P	I	S	L	D	D	V	P	P	R	I	A	R	A	M	E	N	E	E	Y	-	-	W	D	F	D	I	F	E	L	E	A	A	T	H	N	R	PDE8A													
186	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	g829179													

FIGURE 2B



272	-	L	S	C	L	E	-	H	M	Y	H	D	L	G	L	V	R	D	F	S	I	N	P	V	T	L	R	R	W	L	F	C	V	H	D	N	Y	-	R	N	PDE9A
397	P	L	I	Y	L	G	L	K	M	F	A	R	F	G	I	C	E	F	L	H	C	S	E	S	T	L	R	S	W	L	Q	I	I	E	A	N	Y	H	S	S	PDE8A
204	P	L	T	C	V	A	Y	T	I	F	Q	S	R	E	L	L	T	S	L	M	I	P	K	T	F	L	N	F	M	S	T	L	E	D	H	Y	V	K	D	g829179	
309	N	P	F	H	N	F	R	H	C	F	V	A	Q	M	M	Y	S	M	V	L	C	S	L	Q	E	K	F	S	Q	T	D	I	L	I	L	M	T	A	PDE9A		
437	N	P	Y	H	N	S	T	H	S	A	D	V	L	H	A	T	A	Y	F	L	S	K	E	R	I	K	E	T	L	D	P	I	D	E	V	A	A	L	I	A	PDE8A
244	N	P	F	H	N	S	L	H	A	A	D	V	T	Q	S	T	N	V	L	L	N	T	P	A	L	E	G	V	F	T	P	L	E	V	G	A	L	F	A	g829179	
349	A	I	C	H	D	L	D	H	P	G	Y	N	N	T	Y	Q	I	N	A	R	T	E	L	A	V	R	Y	N	D	I	S	P	L	E	N	H	H	C	A	V	PDE9A
477	A	T	I	H	D	V	D	H	P	G	R	T	N	S	F	L	C	N	A	G	S	E	L	A	I	L	Y	N	D	T	A	V	L	E	S	H	H	A	A	L	PDE8A
284	A	C	I	H	D	V	D	H	P	G	L	T	N	Q	F	L	V	N	S	S	S	E	L	A	L	M	Y	N	D	E	S	V	L	E	N	H	H	L	A	V	g829179
389	A	F	Q	I	L	A	E	P	E	-	C	N	I	F	S	N	I	P	P	D	G	F	K	Q	I	R	Q	G	M	I	T	L	I	L	A	T	D	M	A	R	PDE9A
517	A	F	Q	L	T	G	D	D	K	-	C	N	I	F	K	N	M	E	R	N	D	Y	R	T	L	R	Q	G	I	I	D	M	V	L	A	T	E	M	T	K	PDE8A
324	A	F	K	L	L	Q	N	Q	G	-	C	D	I	F	C	N	M	Q	K	K	Q	R	Q	T	L	R	K	M	V	I	D	I	V	L	S	T	D	M	S	K	g829179
428	H	A	E	I	M	D	S	F	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	PDE9A	
557	H	F	E	H	V	N	K	F	V	N	S	I	N	K	P	L	A	T	L	E	N	G	E	T	D	K	N	Q	E	V	I	N	T	M	L	R	T	P	E	PDE8A	
363	H	M	S	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	g829179	

FIGURE 2C

449 H M T L L K M I L I K C C D I S N E V R P M E V A E P W V D C L L E E Y F M Q S PDE9A  
 597 N R T L I K R M L I K C A D V S N P C R P L Q Y C I E W A A R I S E E Y F S Q T PDE8A  
 392 D R I Q V L E N L V H C A D L S N P T K P L P L Y K R W V A L M E E F F L Q G g829179  
 489 D R E K S E G L P V A - P F M D R D K V T K A T A Q I G F I K F V L I P M F E T PDE9A  
 637 D E E K Q Q G L P V V M P V F D R N T C S I P K S Q I S F I D Y F I T D M F D A PDE8A  
 432 D K E R E S G M D I S - P M C D R H N A T I E K S Q V G F I D Y I V H P L W E T g829179  
 528 V T K L F P M V E E I M L Q P L - - - - - W - - - - - - - - - - - - - - - - -  
 677 W D A F V - - D L P D L M Q H L D N N F K Y W K G L - - - - - - - - - - - - - - - - - PDE9A  
 471 W A S L V H P D A Q D I L D T L E E N R D Y Y Q S M I P P S P P S G V D E N P PDE8A  
 545 - E S R D R Y E - E L K R I D D A - M K E L Q K K T D S L - - - - - T S G A g829179  
 701 - - - - - - - - - - D E M K L R N L R P P P E - - - - - - - - - - - - - - - - - PDE9A  
 511 Q E D R I R F Q V T L E E S D Q E N L A E L E E G D E S G G E T T T G T T G T PDE8A  
 575 T E K S R E R S R D - - - - - - - - - - V K N S E G D C A g829179  
 713  
 551 T A A S A L R A G G G G G G G M A P R T G C Q N Q P Q H G G M PDE9A  
 PDE8A  
 g829179

FIGURE 2D

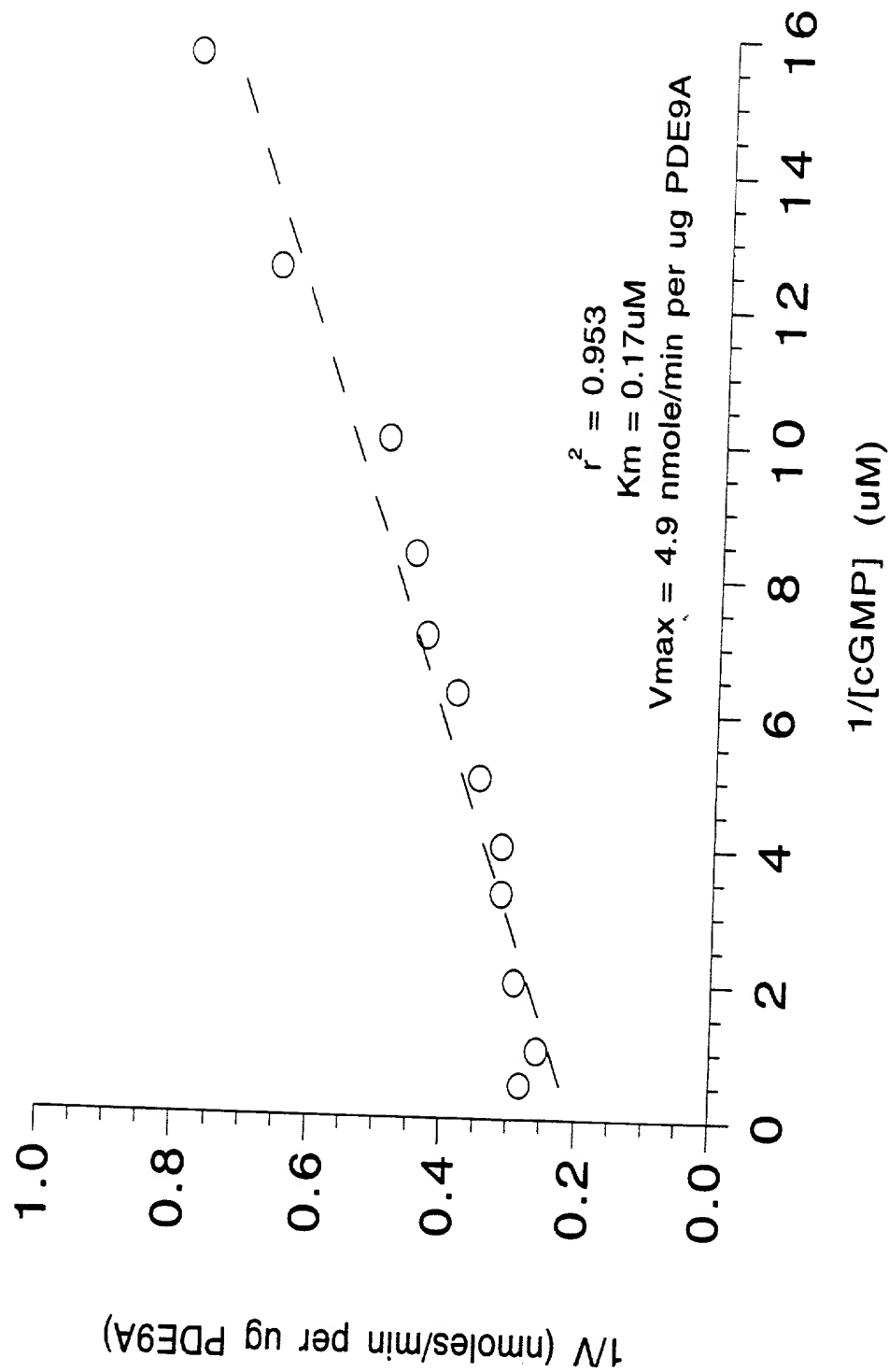


FIGURE 3

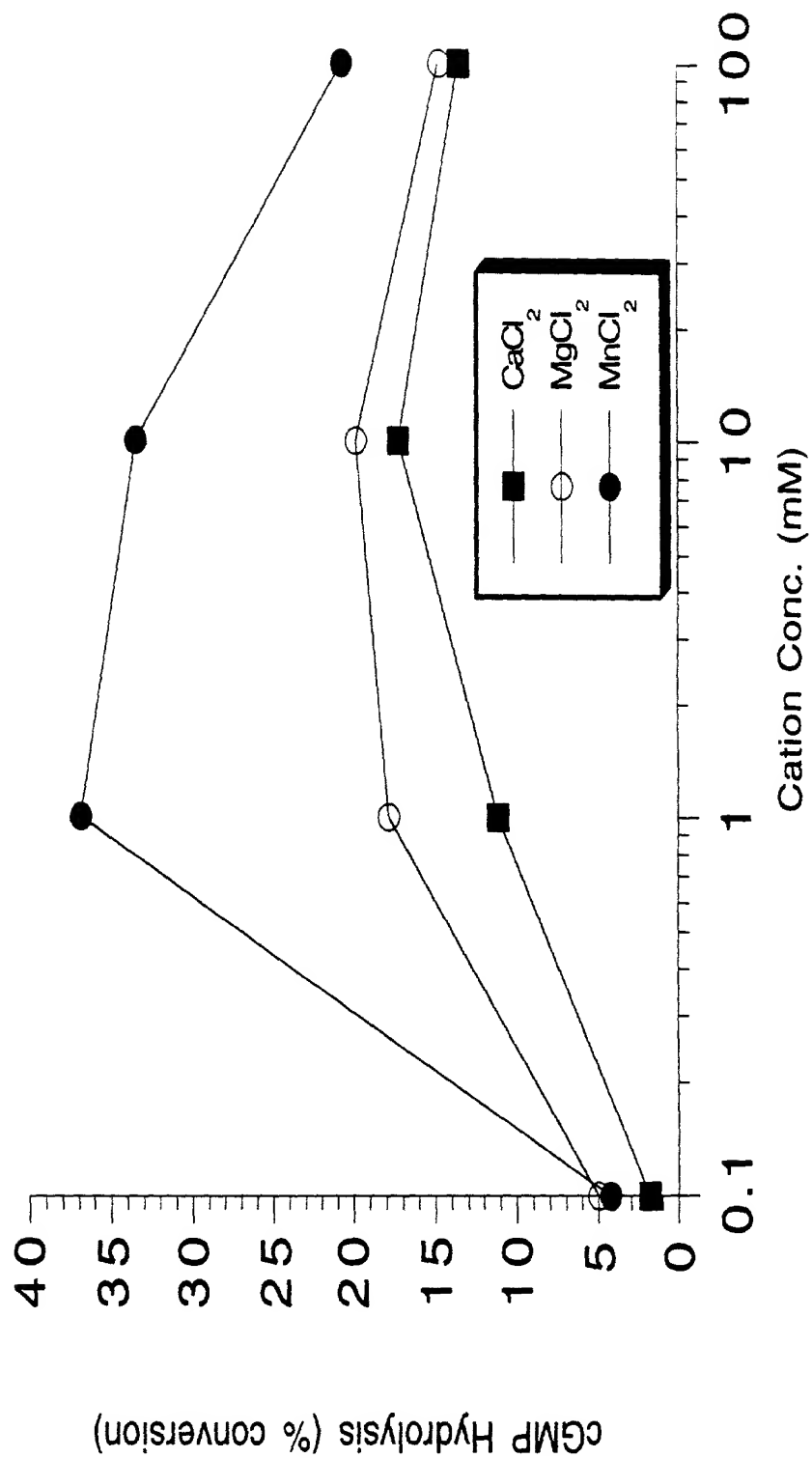


FIGURE 4

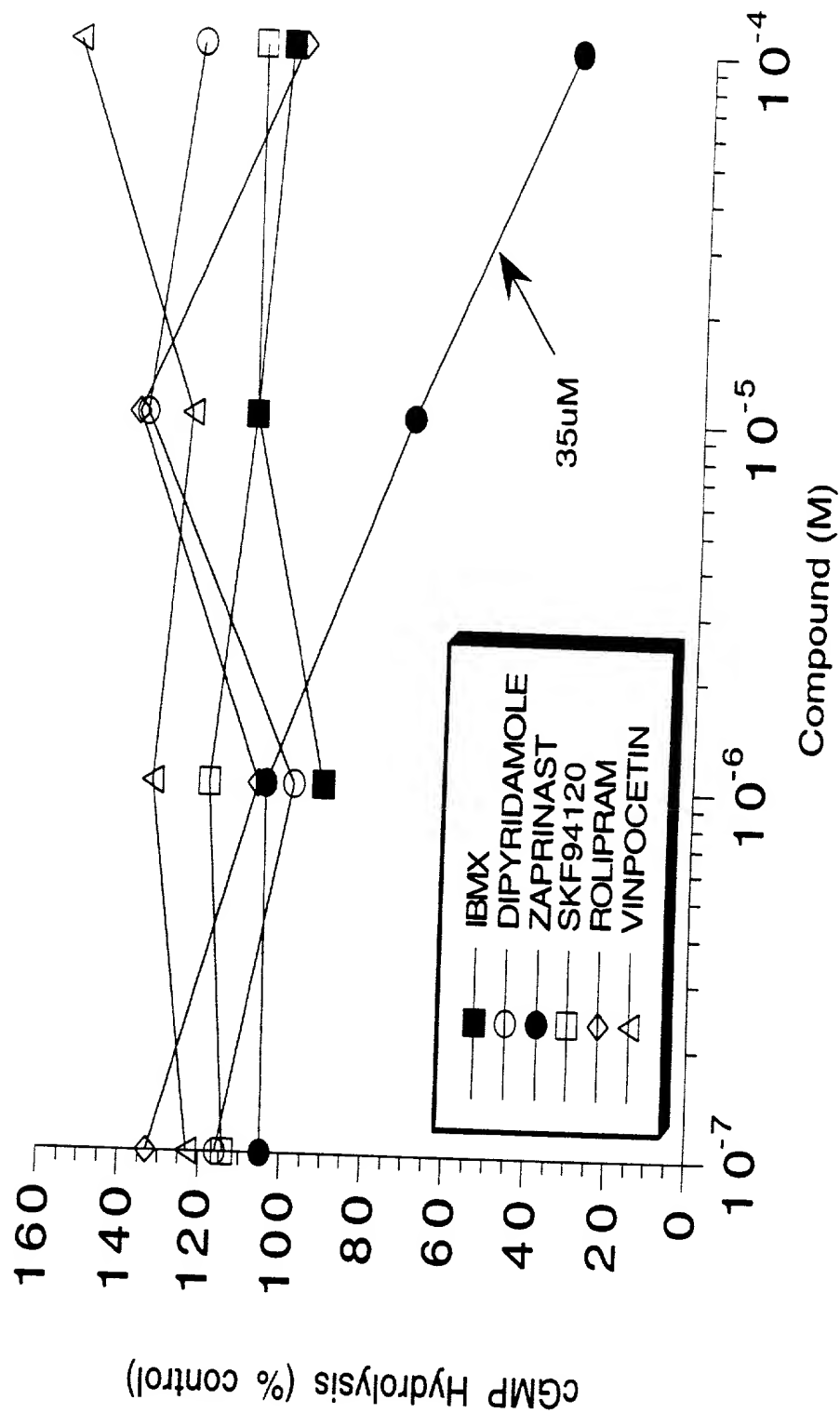


FIGURE 5